

REMARKS

Claims 1-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (U.S. 6,005,646) in view of Hayama et al. (U.S. 5,936,598). Applicants respectfully traverse this rejection for the reasons of record, and as follows. The Nakamura reference in particular is drawn to a driving method which utilizes a bend alignment/OCB mode of the liquid crystal molecules, whereas the present invention is drawn toward a twisted-nematic device and method.

Applicants maintain and incorporate by reference herein those arguments previously advanced in the past three Amendments and Responses, with respect to the Nakamura reference. Applicants respectfully request that the Examiner reconsider those arguments, and withdraw this Section 103 rejection, which is based in part on the Nakamura reference. Additionally, although Applicants do not agree that the Examiner's proposed combination of Nakamura with Hayama is proper, or that claims 1 and 8 of the present invention read upon the Examiner's proposed combination, Applicants have amended independent claims 1 and 8 in order to expedite prosecution. In light of these amendments, Applicants respectfully request that the Examiner consider the following new arguments and comments expanding upon the previous arguments.

As previously discussed, Nakamura teaches a bend alignment/OCB mode liquid crystal display ("LCD") device. An OCB device, such as Nakamura's, applies a large voltage between the pixel electrode and the opposing electrode for changing the molecular

alignment of the liquid crystal molecules from a spray alignment to a bend alignment. Nakamura fails to teach, to operate as, or to in any way suggest twisted-nematic devices, or specific problems associated with twisted-nematic devices.

The present invention, on the other hand, specifically recites that the device and method are drawn toward twisted-nematic (“TN”) devices. Even more specifically, the present invention is capable of addressing particular problems experienced by TN-mode LCD devices, namely, suppressing the change of disclination experienced with TN devices. The problems faced and solved by the present inventors are to be taken into consideration in the determination of the appropriateness of an obviousness rejection under Section 103.

Nakamura therefore, is inapplicable to the present invention, because Nakamura deals with vertical alignment devices, and not TN devices. In a device such as Nakamura’s, it is important to note that small driving voltages are applied when the LCD is in the “black” representation mode, and large driving voltages are applied when the LCD is in the “white” representation mode. In contrast, TN devices, such as those featured in claims 1 and 8 of the present invention, apply *large* driving voltages when the LCD is in the “black” representation mode, and *small* driving voltages when in the “white” representation mode. In other words, Nakamura functions just the opposite to the present invention, and is therefore inapplicable.

Furthermore, the combination of Nakamura with Hayama fails to overcome these deficiencies from the Nakamura reference alone. Hayama is merely cited for teaching a

configuration of certain components of an LCD device, and otherwise merely teaches a low-power driving circuit. Nothing in Hayama teaches or suggests how to switch an OCB mode device, such as Nakamura's, into a TN device. Moreover, nothing in Hayama teaches or suggests how to reverse the magnitudes of the driving voltages for black and white representations on the LCD. In other words, no combination of Hayama with Nakamura teaches or suggests how Nakamura could possibly operate or otherwise function as a TN device.

Accordingly, neither of the two cited references, whether taken alone or in combination, gives any teaching or suggestion to, or how to, merge the two references together to reach the present invention. Additionally, no combination of the two references solves or even addresses the disclination problems associated with TN devices, which are advantageously faced and solved as a result of the recited claim language of the present invention. Because the two references relate to different types of devices, Applicants submit that the Examiner has not established a *prima facie* case of obviousness against the present invention. And because neither reference, alone or together, addresses and solves the problems advantageously solved by the present invention, Applicants submit that any other potential case for obviousness based on these two references has been sufficiently rebutted. Accordingly, the rejection should be withdrawn.

For all of the foregoing reasons, Applicants submit that this Application, including claims 1-16, is in condition for allowance, which is respectfully requested. The

Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By

A handwritten signature in black ink, appearing to read "Josh C. Snider". The signature is stylized with a large, looping "J" and "S".

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